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Title of Scholarship Project:	Investigating the perspectives of staff, students and industry partners on a novel method of teaching undergraduate students transferable skills.

## **1. Introduction**

### **1.1 The Laidlaw Scholarship**

To me, the most important aspect of leadership is being present; physically turning up can sometimes be the most difficult step in a new journey but equally is the most important and impactful action a person can take. So many of life's moments would be missed if we weren't tangibly there and it is not only our own actions, but also the actions of others that shape us as individuals and create our very own sense of self. This lesson has taken me years to learn, and I am still realising the power of being present. Whether the presence is as mundane as attending a lecture, or as life changing as my Laidlaw Scholarship interview, I am learning that you cannot put a price on experience. In my opinion, the best leaders are those who turn up, regardless of the situation. The best leaders understand the power of being present, and this is an enlightenment which has is bringing me more and more meaningful experiences every day.

### **1.2 My Application**

I was first made aware of the Laidlaw Scholarship through a lecturer, who introduced the programme to us as part of an announcement at the end of a workshop. My interest was immediately sparked, not only by the reputation of the scheme, but also the prospect of getting to complete research alongside an academic. I enjoy experiencing new challenges and learning from my mistakes and as a scientist, I gain satisfaction in finding patterns and implementing new knowledge to give a more successful output. I knew working in a high pressure and high consequence setting would facilitate me to thrive in a fast-paced environment and deliver high-quality results in a previously unknown area, pushing me out of my comfort zone and developing my leadership skills in a real-world environment. I instantly decided to apply.

The application process was vigorous, and I found it challenging at times. The initial application questions were thought-provoking and took me many drafts before I was satisfied with my answers. They enabled me to reflect on my, then, current leadership abilities and experiences. Having been involved in sports from a young age, I had many examples to give surrounding this, and I enjoyed being able to recall positive memories throughout my responses. The other component of the initial application was a two-minute video which discussed the Laidlaw values, and more importantly, which one was most impactful for me. "Brave" instantly stood out to me. I had never thought of myself as brave before – I had also associated bravery with a knight going into battle, or protesting for what you believe is right, like the Suffragettes or the Stonewall Revolution. I had never considered that any of my life experiences were particularly brave before; I've always wanted to be seen as brave, whether it was going down the slide first in the playground as a child, or being the only girl on the football team, I had always wanted to be seen as brave, but never actually felt it. This application gave me food for thought however, I realised that my bravest actions were those I did for myself, and not to change others' views of me. I worked hard and achieved high grades for myself, I learned to have my own voice and say no for myself, I learned to be present for myself. I pondered for days about my bravery and grew with the knowledge that I am brave. It was something I had never said to myself before – I am brave. But I wholeheartedly believed it. I went into filming the video with a changed perception of who I was, a brave young woman with aspirations that break the glass ceiling. After recording, editing, and re-recording, I submitted my application, proud of what I had produced but unsure of what would come.

After what felt like a lifetime of waiting, I received an email.

**"Thank you for your application for the Laidlaw Leadership and Research Programme. I am pleased to inform you that you have been selected for an in-person interview."**

I was in the Co-op food shop in the university union when I felt my phone vibrate in my pocket. I assumed it would be a message from a friend, or a social media notification so I initially ignored it. It wasn't until I went to pay and used my phone to access my membership card when I saw the Microsoft Outlook notification. After reading the email, I was filled with a sense of pride, my hard work had paid off, and I had made it through the first stage, I felt proud of myself. I knew there was more hard work to come and headed straight to the library to prepare for the interview.

I carefully began researching and learning the Laidlaw values, ethos, and current work. After days in the library of work however, I had an epiphany – they didn't want to hear about the Laidlaw values, the interviewers would already know them inside-out, but they wanted to hear about me, my opinions, my thoughts, my feelings. They wanted to know if I had the potential to be a change-maker. I continued researching the Laidlaw values but spent the majority of my time reflecting on my leadership and teamworking experiences. I was extremely nervous on the day of the interview; I barely remember the interview itself. I didn't have time to dwell however, due to assignments for various modules being due and therefore needing my full attention.

A few days went by until I received another email. I was once again, in Co-op food.

“Thank you for attending your interview for the Laidlaw Programme last week.

Congratulations! I am delighted to inform you that you have been successful, and we would like you to join the 2024 cohort of Laidlaw Scholars.”

I was filled with instant happiness. I was on the verge of tears. I rushed out of the shop and immediately let my supervisor, parents, and friends know of my success. I was beaming with pride, my hard work had paid off, and I was so excited to begin the new journey.

### 1.3 Leadership Development Residentials

There were two leadership development residentials which I attended before my research began. The first was at the Village Hotel in north Leeds. Having only met the other scholars briefly at the welcome event, I was nervous to be spending an extended period of time with people I didn't know that well. I knew we would all be like-minded, due to the nature of the scholarship, but nonetheless my nerves were present. On arrival however, my nerves were soon alleviated, and we began to take part in team-building and reflective activities. I enjoyed learning about how different personality types contributed to different leadership styles and comparing our results as a group. The Laidlaw dinner was also an enjoyable opportunity to network in a relaxed setting and get to know both my own and previous cohorts.

The week after, there was an outdoor pursuit residential in Selside, North Yorkshire. This trip was much more out of my comfort zone. Throughout the trip I got the experience caving, climbing, and ghyll scrambling – none of which I had ever done before. Throughout the residential I proved to myself that I could lead a team even when I was out of my comfort zone; it built my confidence vastly and helped me to gain an understanding of my own leadership style. I also built

relationships with the other scholars and created friendships that have extended beyond programmed scholarship activities. Both residentials confirmed to me the power of being present. I gained experiences that could only have occurred from being present was such a valuable insight into both skills' development and my own personal reflection.

## **2. My Research Period**

### **2.1 Research Conducted**

As a large number of graduates from the School of Biomedical Sciences do not enter laboratory-based careers after graduation, a structured pathway within programmes of study has been developed where students learn transferable skills that assist their studies during their degree and their career beyond the degree. This is comprised of modules which allow experiential transferable skills development through a team-based project related to cutting-edge science. The modules are formatted so that the students learn about a skill, apply it to the project and learn authentically through assessment, to encourage the development of competencies in the students.

As this is a novel process for skill development and involves authentic co-creation of knowledge with students, there are a number of aspects of the module that are being evaluated and explored. These include the student learning gains, perspectives and motivations, staff perspectives including those directly teaching and supporting the module, as well as those outside of the module and faculty, and the perspectives of industry partners. The goal of this work is to create a model of skills teaching that is applicable beyond the School of Biomedical Sciences and equips students with the skills required for success in university and beyond.

The aim of the work completed was to collect and form recommendations for these taught modules based on the perspectives and input of staff, students and industry partners.

#### **2.1.1 Creating Ways of Disseminating the Learning Model to These Groups**

One of the first responsibilities within the project was to create ways of communicating the novel teaching method. I decided to make a poster as it would be easy to understand and accessible for employers. Making posters has never been one of my strengths, I have always

been very good at data analysis and working with numbers, but weaker at presenting data and working with words.

I initially felt nervous to create a poster, especially one that essentially represented the work and teaching of the School of Biomedical Sciences. I continuously ran my poster drafts by my supervisor who would give feedback and minor changes, but despite the reassurance, I still felt apprehensive. As it was the first main task of my project, I started feeling like an imposter; I questioned whether I deserved to be on the scholarship because I was finding it difficult to create something as easy as a poster.

Despite how I was feeling, I didn't give up on creating the poster and continued working on it throughout the day. I demonstrated resilience and perseverance, two characteristics which I pride myself on. However, I was beginning to become stressed by the tasks and as a result began procrastinating. After struggling for a short while, I confided with one of the other scholars, who was also in the library working on their research project. She suggested that I use a website called "Canva". I had never heard of the platform but decided to attempt to use it, nonetheless. I soon began utilising the AI features on the website, and created a poster which looked presentable, communicated the research, and was easy to understand.

This situation highlighted to me that asking for help is one of the most valuable things you can do. Despite my research project being individual in nature, I still benefitted from collaborating with other scholars and was able to complete a task I had previously been struggling with.

This experience once again highlighted to me the power of being present. By being in the library with other scholars I was able to ask for help and they were able to offer it to me. It created a sense of belonging within the Laidlaw Scholars and I have maintained friendships with those who helped me since, that extend beyond the scholarship activities. I have also gained knowledge on using AI in poster design and would feel more confident next time I am tasked with making an informative poster.

### **2.1.2 Identifying and approaching members of staff and industrial partners**

Approaching unfamiliar people has always been something I have felt comfortable and confident with. I enjoy giving group presentations and working within a team and so I looked forward to engaging with staff and industrial partners.

I felt relaxed when approaching this task. I knew I had the skills and experience to complete the work to a high standard, whilst also enjoying what I was doing. This component of the research was what I looked forward to most and also the part which I gained most satisfaction out of completing. Overall, I think my positive attitude on entering the task meant that not only completed the task more quickly, but also to a higher standard. Compared to my poster, which I entered with apprehension, I felt much more at ease with completing the task, and did not procrastinate at all.

From this, I learnt that entering tasks with a positive attitude leads to increased efficiency and a better overall quality of the finished product. I enjoyed contacting members of staff, and even more so gained satisfaction from the contact I had with external partners. It also gave me a valuable opportunity to build connections with like-minded employers within industries which I am interested in entering after my degree programme.

I continue to feel confident when approaching new connections and feel that my experience through the Laidlaw Scholarship has further increased my confidence. It was not only my own research project that boosted these skills, but also the Laidlaw welcome event, residentials and conference I attended which all contributed to my comfort and positivity surrounding public speaking.

### **2.1.3 Developing questions for and holding interviews or focus groups to gather insights**

Developing questions for interviews was a task I had never completed before. Having completed only a handful of interviews within my life, mainly for jobs relating to hospitality, I didn't know what to expect. I knew these interviews would need to be different from job interviews, with the aim being gathering information on their thoughts rather than selling themselves as a potential employee. I consulted my supervisor on how to conduct a more academic style interview, and after a meeting and advice from various lecturers and academics, I felt more at ease with developing questions. After some time, I developed a list of questions

which would thoroughly collect the information for my research. I identified a list of potential industrial partners based on previous years' placement locations and began sending emails asking for a potential interview.

After a week of waiting, I had not received any responses from employers. I felt demoralised and like giving up. I was convinced that my project was ruined due to the lack of responses. I began to wonder what I had done wrong – whether it was the wording of my email, the poster I had created, or the fact that they just weren't interested. I was almost completely disheartened, and I felt as though my previous weeks' work had all been for nothing.

I knew I would have to take a different approach to my research. Whilst I wasn't expecting every company to respond, I did not expect none at all. I began brainstorming, alongside my supervisor, different ways of collecting data surrounding the skills gap within biomedical sciences graduates; we settled on using industrial advisory board data, graduate outcomes and placement locations. This change was neither good nor bad, but different. It taught me that change can be positive and, in many ways, has benefitted my skills development of data analysis, as well as benefitting the faculty with previously unexplored data analyses.

If I was to receive no research requests in the future, I know that plans can be changed and that research projects are usually flexible. This experience has also taught me not to take decisions to heart; I was initially upset and, in some ways, offended that employers didn't reach out to me, but after reflection, I understand that there would've been many different factors that contributed to why they didn't engage, and not purely because they disliked my research.

#### **2.1.4 Communicating these findings to the staff teaching and developing the modules**

Collecting and analysing data is a skill which I am proficient and confident in. However, presenting data is something I find difficult. I understand the basics on data presentation within Microsoft Excel, but struggle with making these look aesthetically pleasing. I felt similar to when I created the poster at the beginning of my research, however I now know how to approach the task. I began creating the base diagrams, four pie charts, and finished them quickly, but they were not pleasing to the eye.

This time, I didn't feel worried or intimidated by the task. I approached my fellow Laidlaw scholars for advice. After some direction, I managed to create more aesthetically pleasing diagrams with use from Microsoft PowerPoint, a platform I had not previously considered utilising. I approached the task with an open mind and as a result had a more successful outcome to the previous poster. The diagrams were completed with much less stress than the poster and I also felt more comfortable asking for help.

I was able to use the skills and mechanisms I had gained from a previous struggle in order to make this task easier for myself. It gave me the opportunity to reflect on my growth, especially in my confidence when asking others for help, a task I had previously found difficult. I now understand that when I ask for help, I am not being judged by other for not understanding or being able to complete the task, something that previously scared me. I know that others do not care about my inability to complete the task, but rather care about my success and as a result want to help, especially within the Laidlaw Scholars network.

## 2.2 Impact of Research

My research has enabled me to have a direct impact on the future of taught modules within the School of Biomedical Sciences at the University of Leeds. My work helped to identify a disparity between the sectors in which students take industrial placement years in compared to their actual graduate locations. Because of this gap, the need for transferable skills teaching has become even more highlighted within both the school, and the faculty as a whole. The novel teaching method used on the module within my School is potentially going to be implemented throughout the entire faculty, a fact I am very proud of.

My research also involved using industrial advisory boards' data to assess the extent to which the modules and courses delivered by my School are preparing students for the workplace. I created a bubble diagram which demonstrated the strengths and weaknesses of the school which has since been presented at the Bioscience Education Summit 2024, alongside my pie charts depicting different career sectors for industrial placement years and graduate locations.

## 2.3 Activities Undertaken

Attending the 13<sup>th</sup> annual Bioscience Education Summit 2024 was the highlight of my research period. Hosted by Nottingham Trent University, the summit brought together educators, researchers and industry professionals to explore the latest advancements and challenges in bioscience education. I was privileged to be able to present, alongside Alex Holmes and Dave Lewis, our research findings entitled "Creating Global Change Makers: Inclusive, Culturally Immersive, Transformative Education for Sustainable Development Learning Experience." My portion of the presentation focused on a student's perspective of transferable skills development through experiential learning and also included data analysis of graduate outcomes compared to placement year locations. It was an amazing experience which I am very appreciative for, and I have an immense amount of gratitude to contribute towards this collaboration of likeminded individuals. I am looking forward to next year's summit and seeing what outcomes have been generated from the implementation of new ideas presented this year.

As part of the research, I have also created a research poster to discuss my aims and objectives, methods, data and results, and conclusions. I enjoyed creating my poster and am looking forward to posting it on the Laidlaw Scholars Network as well as presenting it to the School of Biomedical Science's members of teaching staff.

### **3. Personal Growth**

#### **3.1 Impact Research Has Had on Me**

Taking part in research has been transformative, pushing me to new depths of knowledge and understanding. At the beginning of the research project, I felt a sense of uncertainty and apprehension. I was unsure of my abilities and felt overwhelmed by the prospect of conducting research at the undergraduate level. However, as I delved deeper into the project, I began to develop a sense of confidence and mastery. I learned new research methods, honed my critical thinking skills, and expanded my academic horizons. Through this process, I was able to challenge myself and push beyond my comfort zone, ultimately leading to personal growth and development. Working closely with a lecturer also provided me with invaluable mentorship and guidance. I was able to learn from someone who had a wealth of knowledge and experience in the field, and who was able to provide me with valuable feedback and support. This mentorship helped me to refine my research skills, improve my writing abilities, and develop a deeper understanding of the subject matter.

### 3.2 Skills Development

My communication skills have significantly improved as a result of this project. From presenting my findings to my peers and mentors to writing research reports, I have learned how to effectively convey my ideas in a clear, concise, and compelling manner. Moreover, collaborating with other researchers, such as Alex (my supervisor) and Dave, (a professor from the faculty) at the Bioscience Education Summit has enhanced my teamwork skills, teaching me the importance of effective communication, cooperation, and mutual respect in achieving common goals.

Furthermore, my research project has strengthened my problem-solving skills as I encountered various challenges and obstacles along the way. By developing creative solutions and adapting to unforeseen circumstances, I have learned the value of resilience, flexibility, and perseverance within research.

### 3.3 Future Plans

My future plans have been informed by my summer research project. I was previously unsure of what career path to pursue, but having enjoyed the research I undertook so much, I have decided that I would like to enter a research-based profession. I would like to embark on advanced level education, including a master's level degree, and possibly even a PhD. I want to research an area that both interests me, I find enjoyable and benefits the wider society. Currently, I am particularly interested in the biomechanics portion of my degree and would love to explore this further.

## **4. Conclusions**

### 4.1 Conclusions I have Drawn

Throughout my first year I have had many opportunities to engage within research, but none quite compares to my Laidlaw Experience. It has allowed me to realise the importance of critical thinking and problem-solving within research. Throughout the project, my experiences have taught me to approach challenges with a creative mindset; by being adaptable and

resourceful when faced with unexpected obstacles, I have improved my diligence skills and detail-orientation in my work. Also, I have come to appreciate the value of collaboration within research, whether it is with academics, other Laidlaw Scholars, or external companies. Exchanging ideas and receiving feedback have both been valuable assets to me throughout the Scholarship. Building these relationships enriched my research experience as it built a sense of community and belonging for me within my School and among the Laidlaw Scholars. I am looking forward to continuing to learn and grow as a researcher.

#### 4.2 What I Would Do Differently Next Time

Reflecting on my summer, there are many areas that I would change, but also many I would do again. When undertaking a research project in the future I would address my preliminary planning stage more thoroughly; I think that I would benefit from structuring my days more clearly instead of just having a to-do list and so I believe better planning would be beneficial. I could create a Gantt chart with my weekly tasks or use the Microsoft Outlook Calendar to better use. Conducting this research has allowed me to understand how intricate and demanding the process can be and has shown me that time-management is a key skill for success.

Also, I would diversify my academic sources the next time I complete research. I relied heavily on a limited number of academic journals, but incorporating a broader range of materials could have provided a more nuanced perspective on building transferable skills within undergraduate students. By using more sources in the future, I will be able to construct more well-rounded arguments that acknowledge more viewpoints.

I would collaborate with my peers again. I found their insight useful and discussing their methodologies contributed to my own approach and ultimately confidence in unknown tasks. Overall, I enjoyed the summer research project and gained many new skills as well as perfecting others; I have become a more well-rounded researcher and feel satisfied with my end results.

### **5. Acknowledgements**

Thank you so much to my supervisor, Dr Alex Holmes, for providing guidance and feedback throughout this project. Thanks also to my fellow Laidlaw Scholars, particularly Daan, Aditi, and Finola for putting up with my incessant chatting in the library. Thank you to the Edward Boyle Library for providing comfort and space to study, as well as putting up with my incessant

chatting. Thank you to the Coop Food shop in the university union, for providing me with daily meal deals, as well as being the location where I received the amazing news that I would receive both the interview and the actual Laidlaw Scholarship. And thank you to my friends and family, for believing in me every step of the way and... putting up with my incessant chatting.

## 6. **Supervisor Comments**

*This research period was, I believe, a useful insight into the world of participatory research and the obstacles that come with it! Megan was proactive in setting up her project plans, completing her ethics, and sending out invites to aspirational graduate employers to be involved in her research. This of course is where the key obstacles appeared – lack of responses and delayed uptake. Megan handled this wonderfully, pivoting to analysing existing data and preparing insights from these. I think her adaptability really shone, alongside perseverance and determination to complete the project to a high standard. Her professional demeanour was demonstrated when she attended and presented at the Bioscience Summit 2024 in early September to an audience of 70 academics. She did a fantastic job presenting and fielding questions, followed by confidently speaking to other attendees; I think this really opened her eyes to pedagogic research and how her project fits into the larger picture. I'm still seeing her approach to innovation and personal initiative develop, but I'm confident that her experiences this summer will set her up with the skills to continue refining these areas.*

*Overall, it's been a challenging project and Megan stepped up to the plate throughout, I think she should be incredibly proud of her work and progress and I'm looking forward to seeing how she continues to grow through the Laidlaw Scholars programme.*

Signature of Scholar		Date: <u>20/ 09/ 24</u>
Signature of Project Leader	<u>. ALEX HOLMES</u>	Date: <u>18/ 09/ 24</u>